

# INTERFACE BOARDS

## FOR 24V FTP-607 SERIES

### FTP-6X7DSL395-R SERIES

#### ■ HIGHLIGHTS

- 24V FTP-607 I/F board for low profile mechanism and cutter
- Supports high-speed serial or USB (2.0) I/F
- Supports bar code and graphics
- Windows®2000/XP, Linux drivers
- UL File No. E171434
- RoHS compliant



#### ■ PART NUMBERS

Part Number	Interface Type		Drivers	Mechanism Part Number
FTP-627DSL395	USB/RS-232C	Flash, SRAM	Windows® 2000/XP, Linux	FTP-6x7MCL401/601

#### ■ INTERFACE SPECIFICATION AT HOST SIDE

Item	Specifications
RS-232C	Data speed: 9.6k, 19.2k, 38.4k, 115.2k, 230.4k, 460.8kbps Synchronous method: Full duplex Handshake: DTR/DSR, XON/XOFF control Parity: Non, even, odd
USB V2.0	Transmission route: Full speed 12Mbps Interface class: Printer device

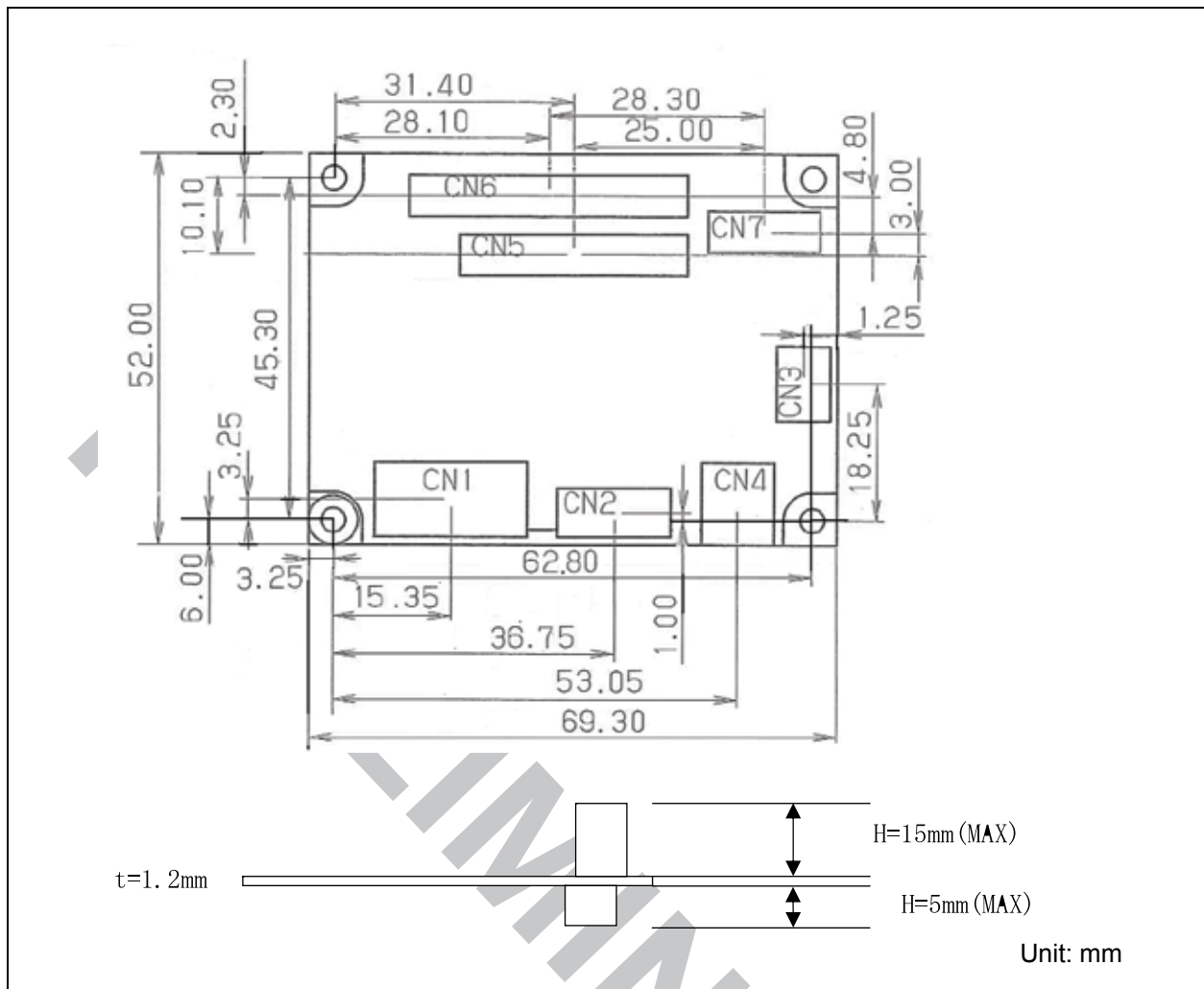
#### ■ DIP SWITCH SETTING DSW1

Bit No.	Setting Function	Setting	Remarks
1	627 2-inch 637 3-inch	OFF ON	Factory setting
2	MCL401 MCL601	OFF ON	Factory setting

#### ■ RS-232C SETTINGS

Function	Factory	Command
Baud data	19200 bps	(50)
Parity	Non	

## ■ DIMENSIONS



### 1.2 Control circuit board connector types

Symbol	Name	Function	Note
CN1	Power	24V connection	
CN2	Serial I/F (RS232-C)	Serial (RS-232C) connection	
CN3	Near end	NES switch connection	
CN4	USB	USB connection	
CN5	Head/motor	2-inch FPC connection	FTP-627MCL401
CN6	Head/motor	3-inch FPC connection	FTP-627/637MCL601 FTP-637MCL401
CN7	Cutter FPC	Cutter connection	

## ■ CONNECTOR PIN ASSIGNMENT OF INTERFACE BOARD

### 1. Connector for Logic, Head, Motor Power supply (CN1)

Board side: S6B-XH-SM4-TB (J.S.T) or equivalent

Other side: XHP-6 or equivalent

No	Signal	I/O	Contents
1-3	+24V	I	Power 24V
4-6	GND	-	Ground of 24V

### 2. RS-232C

#### (1) Connector (CN2)

Connector part number : S8B-ZR-SM4A-TF (J.S.T.) or equivalent

Mating connector part number : ZHR-8 (J.S.T.) or equivalent

#### (2) Connector pin assignment

No	Signal	I/O	Contents No.	No	Signal	I/O	Contents No.
1	RD		Receive data	2	TD	O	Transmission data
3	DTR	O	Data terminal ready	4	GND	-	Signal ground
5	DSR		Data set ready	6	SLCTN		Printer Select
7	INPRM		Reset	8	ATF		Paper feed request

Notes:

- Symbol “—” means a negative logic signal.
- “I” or “O” means a signal direction from the interface board side.

### 3. Connector for Paper Near-End Sensor (CN3)

Board side: B3B-PH-SM4-TBT (J.S.T) or equivalent (P.C.B. side)

Other side: PHR-3 (J.S.T.)

No	Signal	I/O	Contents	No	Signal	I/O	Contents
1	+3V	O	Power for logic	2	NC	-	Not used
3	NES	I	Paper near-end signal				

### 4. USB standard

#### (1) Connector (CN4)

Connector part number :

Mating connector part number : 51387-0530 (Molex or equivalent)

#### (2) Connector pin assignment

No	Signal	I/O	Contents
1	Vbus	I	Bus power supply
2	D-	I/O	Differential data I/O D- terminal
3	D+	I/O	Differential data I/O D+ terminal
4	N.C.	-	No connector
5	GND	-	Signal ground terminal

Notes:

- Symbol “—” means a negative logic signal.
- “I” or “O” means a signal direction from the interface board side.

## ■ CONNECTOR PIN ASSIGNMENT OF MECHANISM (FPC)

### 1. Thermal Head (CN 5)

Part number : 52610-2471 Molex or equivalent

#### FTP-627MCL401 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	PHK		Cathode
2	VSEN	O	Logic power supply
3	PES		Paper out detection signal
4	+24 V	O	Power supply for thermal head
5	HDI	O	Print data in signal
6	STB2	O	Head energizing control signal
7	STB3	O	
8	+5V	O	Logic power supply
9	GND	—	Ground of power supply
10	GND	—	
11	GND	—	
12	TM	I	Thermistor
13	STB1	O	Head energizing signal
14	LAT	O	Print data latch signal
15	CLK	O	Datacomm clock signal
16	+24V	O	Power supply for thermal head
17	+24V	O	
18	GND	—	Ground
19	HUP		Head up
20	MT $\bar{A}$	—	Phase signal for motor
21	MT A	—	
22	MT $\bar{B}$	—	
23	MT B	—	
24	NC	—	Not connected

### 2. Cutter unit (CN 7)

Part number : 52610-0871 Molex or equivalent

#### FTP-627MCL401 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	VSEN	O	Logic power supply
2	PHE	I	Home Position Signal
3	PHK		Cathode side of sensor
4	MT $\bar{A}$	-	Cutter drive signal
5	MT A	-	Cutter drive signal
6	MT $\bar{B}$	-	Cutter drive signal
7	MT B	-	Cutter drive signal
8	N.C.	-	Not connected

## ■ CONNECTOR PIN ASSIGNMENT OF MECHANISM (FPC)

### 1. Thermal Head (CN 6)

Part number : 52610-3071 Molex or equivalent

#### FTP-637MCL401/FTP-6x7MCL601 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	PHK		Cathode
2	VSEN	O	Logic power supply
3	$\overline{\text{PES}}$		Paper out detection signal
4	+24 V	O	Power supply for thermal head
5	+24V	O	
6	+24V	O	
7	HDI	O	Print data in signal
8	$\overline{\text{STB3/2}}$	O	Head energizing signal
9	$\overline{\text{STB4/3}}$	O	
10	+5V	O	Logic power supply
11	GND	—	Ground for thermal head
12	GND	—	
13	GND	—	
14	GND	—	
15	GND	—	
16	GND	—	
17	TM		Thermistor
18	$\overline{\text{STB1/NC}}$	O	Head energizing signal 1/NC (3/2-inch)
19	$\overline{\text{STB2/1}}$	O	Head energizing signal 2/1 (3/2-inch)
20	$\overline{\text{LAT}}$	O	Print data latch signal
21	CLK	O	Datacomm clock signal
22	+24V	O	Power supply for thermal head
23	+24V	O	
24	+24V	O	
25	GND	—	Ground
26	HUP		Head up
27	$\overline{\text{MT A}}$	—	Phase signal for motor
28	MT A	—	
29	$\overline{\text{MT B}}$	—	
30	MT B	—	

### 2. Cutter unit (CN7)

Part number : 52610-0871 Molex or equivalent

#### FTP-637MCL401/601 PIN ASSIGNMENT

No	Signal	I/O	Contents
1	VSEN	O	Logic power supply
2	PHE		Home Position Signal
3	PHK		Cathode side of sensor
4	$\overline{\text{MT A}}$	-	Cutter drive signal
5	MT A	-	Cutter drive signal
6	$\overline{\text{MT B}}$	-	Cutter drive signal
7	MT B	-	Cutter drive signal
8	N.C.	-	Not connected

## ■ COMMANDS

Command	Contents
HT	Moves print position to the next tab
LF	Line feed
FF	Feeds forms (new page)
ESC EM+n	Setting the amount of the feeding at automatic paper feed
ECS RS	Sets reverse printing
ESC SP+n	Right side character spacing
ESC US	Resets reverse printing
ESC ! + n	Sets print mode
ESC % + n	External registration character specification/cancellation
ESC &+y+c <sub>1</sub> +c <sub>2</sub> +x+d <sub>1</sub> ~d <sub>N</sub>	Download character definition
ESC *+m+n <sub>1</sub> +n <sub>2</sub> +d <sub>1</sub> ~d <sub>N</sub>	Sets bit image mode
ESC - + n	Underline setting
ESC 2	Sets 1/6 inch line feed length
ESC 3+n	Sets the line feed length
ESC ? + n	External registration character deletion
ESC @	Printer initialization
ESC A+n	Sets the space between the line
ESC C+n	Sets the page length by character line
ESC D+d <sub>1</sub> ~d <sub>N</sub> +NUL	Sets the tab position
ESC J+n	Feeds paper in forward direction and prints
ESC K+n	Reverse paper feed
ESC R +n	International character specification
ESC V+n	Right rotation 90°
ESC X+m+n	Setting the turning time of the motor excitation
ESC c+1+n	Sets internal processing (including auto paper loading)
ESC c+5+n	Panel switch enable/disable setting
ESC d+n	Printing and n-line feeding
ESC e +n	Prints and reverse feeds n-lines
ESC i	Full cut
ESC m	Partial cut

Commands continued

Command	Contents
ECS s+n	Sets printing speed
ECS t+n	Character code table selection
ESC {+n	Sets/resets upside down printing
ESC DEL +n	Flash memory erase
FS !+n	Kanji printing mode collective specification* <sup>1</sup>
FS &	Kanji printing mode specification* <sup>1</sup>
FS *+m+n <sub>1</sub> +n <sub>2</sub> +d <sub>1</sub> ~d <sub>N</sub>	High speed collective image printing specified
FS -+n	Kanji underline specification/cancellation* <sup>2</sup>
FS .	Kanji printing mode cancellation* <sup>1</sup>
FS 2+c <sub>1</sub> +c <sub>2</sub> +d <sub>1</sub> to dn	External character definition* <sup>1</sup>
FS 9+n	Detection function enable/disable setting
FS C+n*	Kanji code system selection
FS E+n	Correction of impressed energy
FS S+n <sub>1</sub> +n <sub>2</sub>	Kanji spacing setting
FS W+n*	Kanji double height and width mode specification/cancellation
FS r+n	Parameter transmission. (Serial Mode only).
GS !+n	Character size specification
GS &+m+x+y <sub>1</sub> +y <sub>2</sub> +d <sub>1</sub> ~d <sub>N</sub>	Registration of image data
GS '+m+n	Prints registered image data
GS(E+L1+2+fn+d <sub>1</sub> ~d <sub>9</sub> ) (fm-67)	RS-232C Communication setting
GS <	Line feeds to the next mark
GS A+m+n	Sets the line feed length after mark detection
GS E+n	Sets print quality.
GS L+n <sub>1</sub> +n <sub>2</sub>	Left margin position setting
GS V+m+n	Paper cutting (for pending cutter models only)
GS W+n <sub>1</sub> +n <sub>2</sub>	Print area width setting
GS a+n	Setting and cancellation of auto status transmission (serial mode only).
GS e+n+m	Sets bar code width
GS h+n	Sets bar code height
GS k+m+n+d <sub>1</sub> ~d <sub>N</sub>	Selects bar code type and prints
GS w+n	Sets bar code width magnification

\*<sup>1</sup>: External Flash memory

\*<sup>2</sup>: SRAM

## ■ OPTIONS

### 1. Cables

Name		Part Number	Length (mm)
Interface Cable (between board and equipment)	For USB (CN4)	FTP-629Y301	500 (19.7 inches)
	For RS232C (CN2)	FTP-628Y302	500 (19.7 inches)
Power supply cable	Logic, Head/motor (CN1)	FTP-629Y601	300 (11.8 inches)

### 2. Driver LSI of Control Board

Name	Part Number	Quantity / Tray	Remarks
MCU	FTP-627CU351	90	On board Flash/SRAM

### 3. Paper holder

Name	Part number
Paper Flange	FTP-040HF
Paper Stand	FTP-040HS

## Fujitsu Components International Headquarter Offices

<p><b>Japan</b> Fujitsu Component Limited Gotanda-Chuo Building 3-5, Higashigotanda 2-chome, Shinagawa-ku Tokyo 141 8630, Japan Tel: (81-3) 5449-7010 Fax: (81-3) 5449-2626 Email: <a href="mailto:promothq@fcl.fujitsu.com">promothq@fcl.fujitsu.com</a> Web: <a href="http://www.fcl.fujitsu.com">www.fcl.fujitsu.com</a></p>	<p><b>Europe</b> Fujitsu Components Europe B.V. Diamantlaan 25 2132 WV Hoofddorp Netherlands Tel: (31-23) 5560910 Fax: (31-23) 5560950 Email: <a href="mailto:info@fceu.fujitsu.com">info@fceu.fujitsu.com</a> Web: <a href="http://emea.fujitsu.com/components/">emea.fujitsu.com/components/</a></p>
<p><b>North and South America</b> Fujitsu Components America, Inc. 250 E. Caribbean Drive Sunnyvale, CA 94089 U.S.A. Tel: (1-408) 745-4900 Fax: (1-408) 745-4970 Email: <a href="mailto:components@us.fujitsu.com">components@us.fujitsu.com</a> Web: <a href="http://us.fujitsu.com/components/">http://us.fujitsu.com/components/</a></p>	<p><b>Asia Pacific</b> Fujitsu Components Asia Ltd. 102E Pasir Panjang Road #01-01 Citilink Warehouse Complex Singapore 118529 Tel: (65) 6375-8560 Fax: (65) 6273-3021 Email: <a href="mailto:fcal@fcal.fujitsu.com">fcal@fcal.fujitsu.com</a> Web: <a href="http://www.fujitsu.com/sg/services/micro/components/">http://www.fujitsu.com/sg/services/micro/components/</a></p>

©2011 Fujitsu Components America, Inc. All rights reserved. All trademarks or registered trademarks are the property of their respective owners.

Fujitsu Components America or its affiliates do not warrant that the content of datasheet is error free. In a continuing effort to improve our products Fujitsu Components America, Inc. or its affiliates reserve the right to change specifications/datasheets without prior notice.  
Rev. July 26, 2011.